

Claims

1. A method for calibrating an image-scanning module scanning a reference sheet to produce an image, said image-scanning module having a first midpoint, said first midpoint corresponding to a first midpoint coordinate value on said image, said reference sheet including a target label, a first label corresponding to a first end of said reference sheet and a second label corresponding to a second end of said reference sheet, a distance between said first label and said second label being a first value, said method comprising:
 - (a) scanning said reference sheet to obtain a target coordinate value corresponding to said target label, a first coordinate value corresponding to said first label and a second coordinate value corresponding to said second label;
 - (b) obtaining a second midpoint coordinate value according to said first coordinate value and said second coordinate value;
 - (c) calculating a shift value as being a difference between said second midpoint coordinate value and said first midpoint coordinate value;
 - (d) calculating a second value as being a difference between said first coordinate value and said second coordinate value;
 - (e) calculating a magnification as being a ratio of said second value to said first value; and
 - (f) adjusting said target coordinate value to obtain a calibrated target coordinate value according to said shift value and said magnification.
2. The method of claim 1, further comprising: setting said target label to correspond to said calibrated target coordinate value.

3. The method of claim 1, wherein said step (f) comprises adding said shift value to said target coordinate value to obtain said calibrated target coordinate value.
4. The method of claim 3, wherein said step (e) comprises adding said shift value to said target coordinate value and then normalizing said target coordinate value according to said magnification to obtain said calibrated target coordinate value.
5. The method of claim 1, wherein said step (e) comprises normalizing said target coordinate value according to said magnification to obtain said calibrated target coordinate value.
6. The method of claim 1, wherein said second midpoint coordinate value is obtained as being an average of said first coordinate value and said second coordinate value.
7. The method of claim 1, wherein said first label and said second label are black segments respectively.
8. The method of claim 1, wherein said target label comprises a gray-scale patch.
9. The method of claim 1, wherein said image-scanning module comprises a lens.
10. The method of claim 1, wherein said image-scanning module comprises a photo-sensing device.

11. The method of claim 10, wherein said photo-sensing device comprises a charge coupled device.
12. The method of claim 10, wherein said photo-sensing device comprises a contact image sensor.